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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (cancelled)

2. (currently amended) A soluble purified Phosphate Regulating Gene with Homologies to Endopeptidases on the X Chromosome enzyme (secPHEX) having the amino acid sequence as set forth in SEQ ID NO:1, wherein the modified so that amino acid residues located from position 27 to position 46 inclusively according to the numbering used in the sequence of SEQ ID NO: 1 have been replaced by the amino acid residues as set forth in of SEQ ID NO: 4.

3-5. (cancelled)

6. (currently amended) A mutant of the secPHEX of claim 12, consisting of a Phosphate Regulating Gene with Homologies to Endopeptidases on the X Chromosome enzyme having the glutamic acid residue at position 581 according to the numbering used in the sequence of SEQ ID NO: 1 substituted with a valine residue.

7-12. (cancelled)

13. (previously amended) An antigenic composition, which comprises the secPHEX of claim 2.

14-19. (cancelled)

20. (previously amended) A composition comprising the secPHEX of claim 2 and a pharmaceutically acceptable carrier.

21. (previously amended) A composition comprising the secPHEX of claim 6 and a pharmaceutically acceptable carrier.

22-32. (cancelled)

33. (previously amended) A method for obtaining a Phosphate Regulating Gene with Homologies to Endopeptidases on the X Chromosome (PHEX) ligand which comprising the steps of:

- contacting a sample containing one or more molecules with a secPHEX as defined in claim 2 in conditions such that binding of said one or more molecules with PHEX can occur;
- detecting said binding as an indication of the presence of a PHEX ligand in said sample; and
- selecting said PHEX ligand.

34. (original) The method of claim 33, wherein said ligand is a PHEX inhibitor or substrate.

35-40 (cancelled).